

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image processing method ~~approximating a small region on a color image with~~ extracting a specific number of representative colors, which from colors of a small region on a color image, the image processing method comprising the steps of:

~~calculating a statistic of each data per color composing the small region~~ statistics of the small region in color for respective color components;

selecting one color component among the ~~above colors~~ color components as a target ~~color component~~ according to the statistic, and a comparison between the statistics;

dividing the small region into two sections according to a ~~specific reference of the color data of the target component color;~~ and

extracting ~~respective representative colors for two sections~~ a representative color for each section from colors of the section.

2. (Currently Amended) An image processing method according to claim 1, ~~which further comprising the step of setting the sections as the small regions~~ each section as a small region if the number of the sections is less than the specific number.

3. (Currently Amended) An image processing method according to claim 1, wherein the statistics are variances for respective color components ~~statistic is a variance,~~ while the reference is an average of data of the small region in the target component ~~color data of the target color.~~

4. (Currently Amended) An image processing method according to claim 1, wherein the representative color is an average of ~~each color data of picture element included in the~~ each section.

5. (Currently Amended) An image processing method according to claim 1, ~~which~~ further comprising the ~~more~~ steps of:

~~detecting the color difference~~ computing color differences among ~~each color~~ data included in the small region; and

determining the specific number according to the color ~~difference~~ differences.

6. (Currently Amended) An image processing method according to claim 1, ~~which~~ further comprising the ~~more~~ steps of:

extracting the number of colors included in the small region;

comparing the extracted number of colors and the specific number; and

setting the extracted number of colors as the specific number when the extracted number of colors is less than the specific number ~~comparing each number of colors~~.

Claims 7-8 (Cancelled)

9. (Currently Amended) An image processing method ~~including the step of approximating a small region on a color image with specific number of representative colors;~~ which according to claim 1, further comprising the steps of:

preparing region color data, which is a pair of the ~~color~~ data of the representative colors prepared by the approximating and region information indicating a section including picture elements of the small region approximated with each representative color sections of which the representative colors are extracted from colors; and

increasing the number of representative colors sequentially.

10. (Currently Amended) An image processing method according to claim 9, which further comprising the ~~more~~ step of preparing a displayed image for a user from the region color data by selecting the number of the representative ~~color~~ colors.

11. (Currently Amended) An image processing method according to claim 9, which further comprising the ~~more~~ step of transmitting the region color data by increasing the number of the representative colors sequentially.

12. (Currently Amended) An image processing method according to claim 9, which further comprising the steps of:

receiving the region color data by increasing the number of the representative ~~color~~ colors sequentially; and

displaying the color image for a user by increasing the number of the representative ~~color~~ colors sequentially per the receiving.

13. (Currently Amended) An image processing method according to claim 9, which further comprising the steps of:

setting the number of colors ~~enough to display the~~ required for displaying an image for a user;

extracting plural representative colors from the region color data ~~corresponding~~ according to the required number of colors; and

deriving the color data of the displayed image according to the plural representative colors.

14. (Currently Amended) An image processing method ~~including the step of~~ approximating a small region on a color image with specific number of representative colors, which according to claim 1, further comprising the step steps of:

switching ~~the~~ a mode between a color mode and the a monochrome mode[[:]], and wherein when the mode is switched to the monochrome mode, a specified color data is selected instead of the target component and selecting a specified color data in the monochrome mode; ~~dividing the small region is divided~~ into two sections according to ~~[[the]]~~ a reference value of the selected color data instead of the target component; and

~~when the number of sections is less than the specific number, setting the sections as the small region.~~

15. (Original) An image processing method according to claim 14, wherein the reference value is an average.

16. (Currently Amended) An image processing apparatus ~~approximating a small region on a color image with~~ extracting a specific number of representative colors, which from colors of a small region on a color image, the image processing method comprising:

~~statistic calculating means for calculating a statistic of each color data of the small region~~
statistics of the small region in color for respective color components;

~~dividing means for dividing the small region into two sections according to a specific reference together with~~ selecting one color among the ~~above colors~~ color components as a target color component according to a comparison between the statistics and dividing the small region into two sections according to a reference of the target color component ~~the statistic~~; and

~~representative-color extracting means for extracting a respective color for each section from colors of the section~~ respective representative colors for two sections.

17. (Currently Amended) An image processing apparatus according to claim 16, ~~which further~~ comprising setting means for setting ~~the section as the small region~~ each section as a small region when the number of the sections is less than the specific number.

18. (Currently Amended) An image processing apparatus according to claim 16, wherein the statistics are variances for respective color components ~~statistic is a variance~~, and the reference is an average of data of the small region in the target component ~~the color data~~.

19. (Currently Amended) An image processing apparatus according to claim 16, wherein the representative color is an average of ~~each color data of picture element included in~~ the each section.

20. (Currently Amended) An image processing apparatus according to claim 16, ~~which~~
further comprising:

color-difference detecting means for ~~detecting the color difference~~ computing color
differences among color data included in the small region; and

number-of-representative-color determining means for determining the specific number
according to the color ~~difference~~ differences.

21. (Currently Amended) An image processing apparatus according to claim 16, ~~which~~
further comprising:

number-of-color extracting means for extracting the number of colors included in the
small region; and

number-of-representative-color setting means for, when the extracted number of colors is
smaller than the specific number by comparing the number of colors, setting the extracted
number of colors as the specific number.

Claims 22-23 (Cancelled)

24. (Currently Amended) An image processing apparatus ~~including the approximating~~
~~means for approximating a small region on a color image with specific number of representative~~
~~colors, which~~ according to claim 16 further comprising:

region-color-data preparing means for preparing a region color data combining the color
data of the representative color colors ~~prepared by the approximating~~ and region information

indicating ~~a section including picture elements in the small region approximated with the representative color~~ sections of which the representative colors are extracted from colors, by increasing the number of representative colors sequentially. [[.]]

25. (Currently Amended) An image processing apparatus according to claim 24, ~~which~~ further comprising displayed image preparing means for preparing a displayed image for a user from the region color data by selecting the number of the representative colors.

26. (Currently Amended) An image processing apparatus according to claim 24, ~~which~~ further comprising transmitting means for transmitting the region color data by increasing the number of the representative colors sequentially.

27. (Currently Amended) An image processing apparatus according to claim 24, ~~which~~ further comprising:

receiving means for receiving the region color data by increasing the number of the representative colors sequentially; and

displaying means for displaying the color image for a user by increasing the number of the representative colors sequentially at the time of the receiving.

28. (Currently Amended) An image processing apparatus according to claim 24, ~~which~~ further comprising:

number-of-color setting means for setting the number of colors required for displaying an ~~enough to display the~~ image for a user;

representative-color extracting means for extracting plural representative colors from the region color data according ~~corresponding~~ to the required number of colors; and

displayed-color deriving means for deriving the color data of the displayed image by combining the plural representative colors.

29. (Currently Amended) An image processing apparatus ~~including the approximating means for approximating a small region on a color image with specific number of representative colors, which~~ according to claim 16, further comprising:

mode switching means for switching ~~the~~ a mode between a color mode and the a monochrome mode; ~~and~~

~~color data selecting means for selecting a specific color data in the monochrome mode;,~~
and

wherein when the mode is switched to the monochrome mode, a specified color data is selected instead of the target component and said dividing means for dividing divides the small region into two sections according to the a reference value of the selected color data instead of the target component; and when the divided number of sections is less than the specific number,
~~setting means for setting the sections as the small region.~~

30. (Original) An image processing apparatus according to claim 29, wherein the reference value is an average.

31. (Currently Amended) An image processing apparatus provided with a transmitting device ~~dividing a color image into small regions and transmitting them~~ transmitting data of a

color image divided into plural small regions, and a receiving device receiving the ~~color~~
transmitted data of the small region and restoring and displaying the color image corresponding
to the ~~color~~ data, wherein[[,]] the transmitting device comprising:

~~approximating means for approximating the small region with plural representative~~
~~colors;~~

statistic calculating means for calculating statistics of the small region in color for
respective color components;

dividing means for selecting one color among the color components as a target
component according to a comparison between the statistics and dividing the small region into
two sections according to a reference of the target color component; and

representative-color extracting means for extracting a respective color for each section
from colors of the section;

region-color-data preparing means for preparing a region color data combining the color
data of the representative ~~color~~ colors prepared by the approximating and region information
indicating sections of which the representative colors are extracted from colors a section
~~including picture elements in the small region approximated with each representative color; and,~~

transmitting means for transmitting the region color data, and,

the receiving device comprising:

receiving means for receiving the region color data by increasing the number of the
representative colors sequentially; and

displaying means for displaying the color image for a user by increasing the number of
the representative colors sequentially at the time of the receiving.